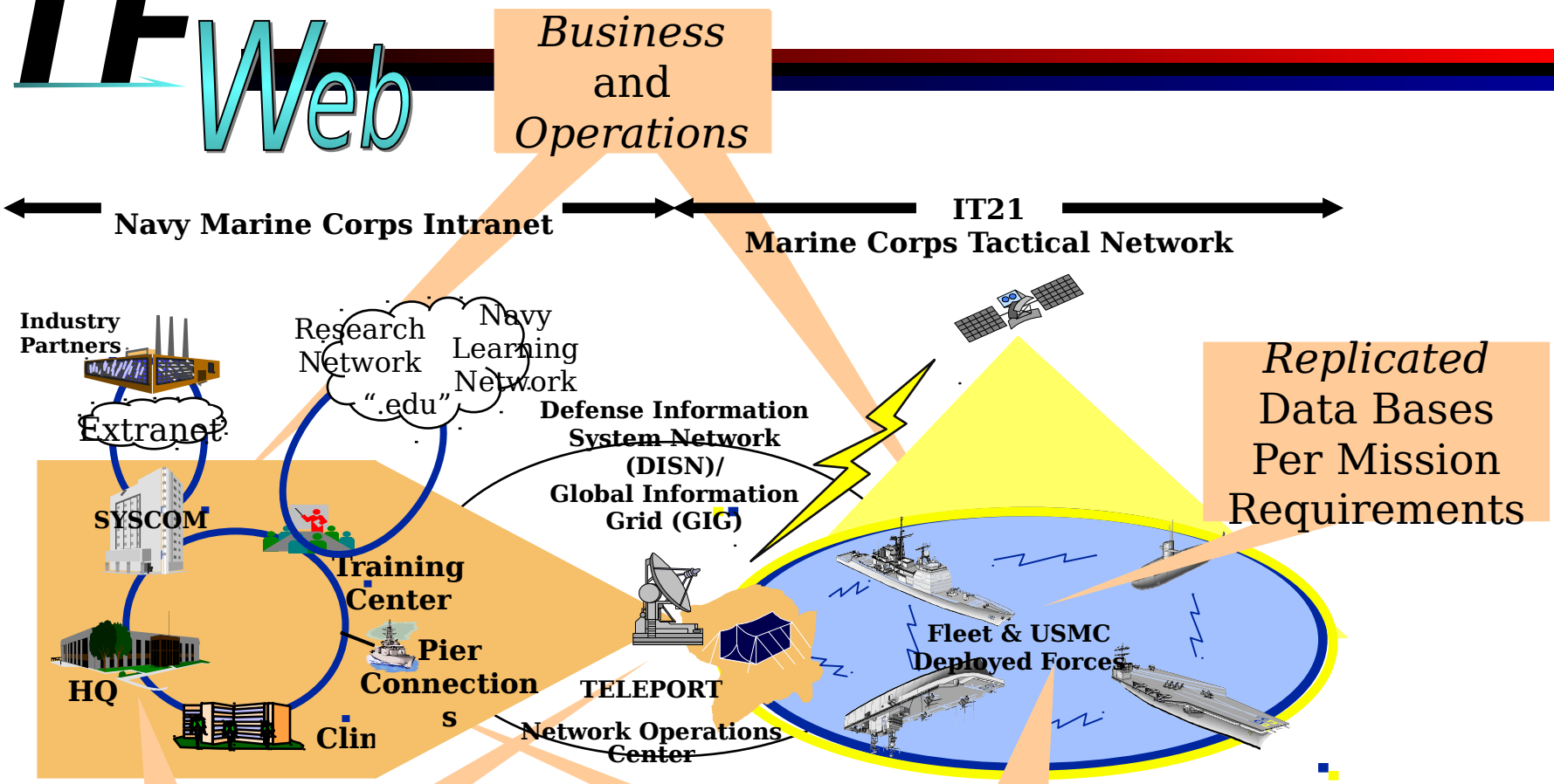
Task Force WEB

Technical Brief

Architectural Framework

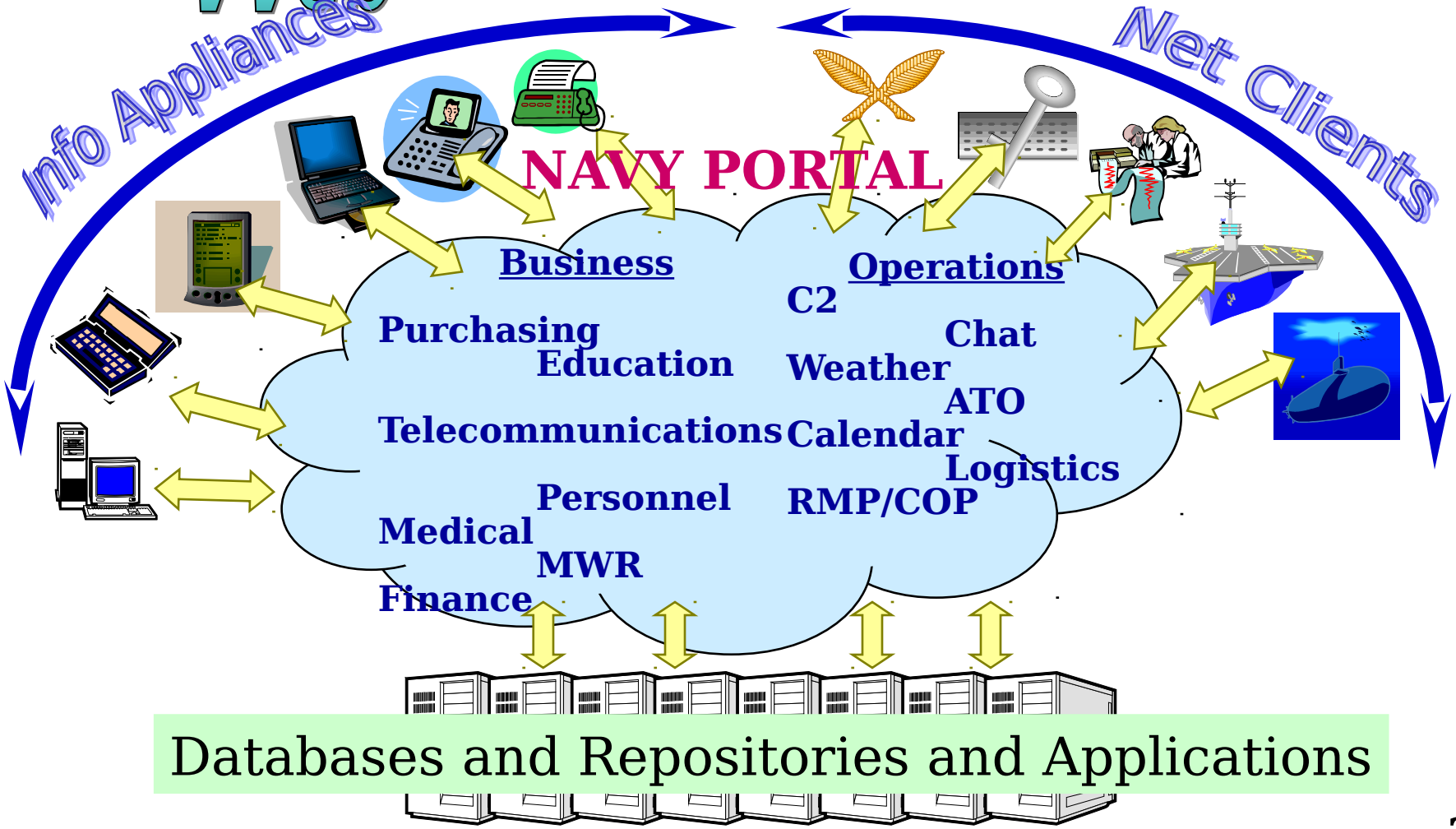
TFWeb

Business and *Operations*



Service-Centric Overlay

TFWeb



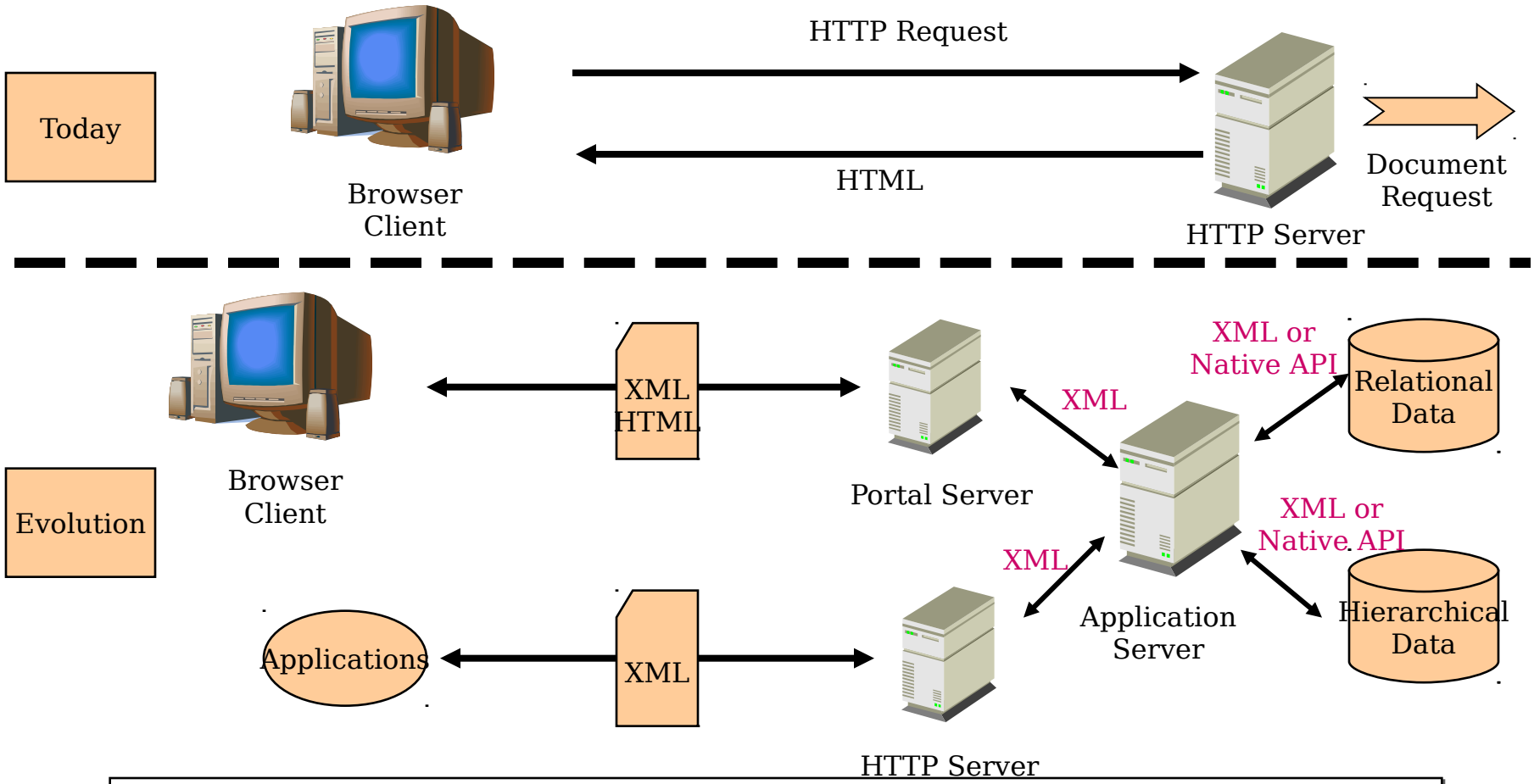
Databases and Repositories and Applications

TF Web Emerging Technologies

From	To
• Proprietary systems	• Internet standard based systems
• Wired	• Wireless
• HTML	• XML
• Limited browser use	• Universal portal use
• Manual use	• Automation
• Limited specific use	• Service Centric Usage
• Diverse message formats	• Common message format (XML)
• Diverse database exchanges	• XML based database exchanges
• Low bandwidth	• More efficient use of bandwidth
• Desktop	• Network appliance / Handheld
• MHz computers	• GHz computers and PDAs

Web Evolution

TFWeb



volution Is To Full Automation of Information Access---The Semantic We

Extensible Markup Language - XML

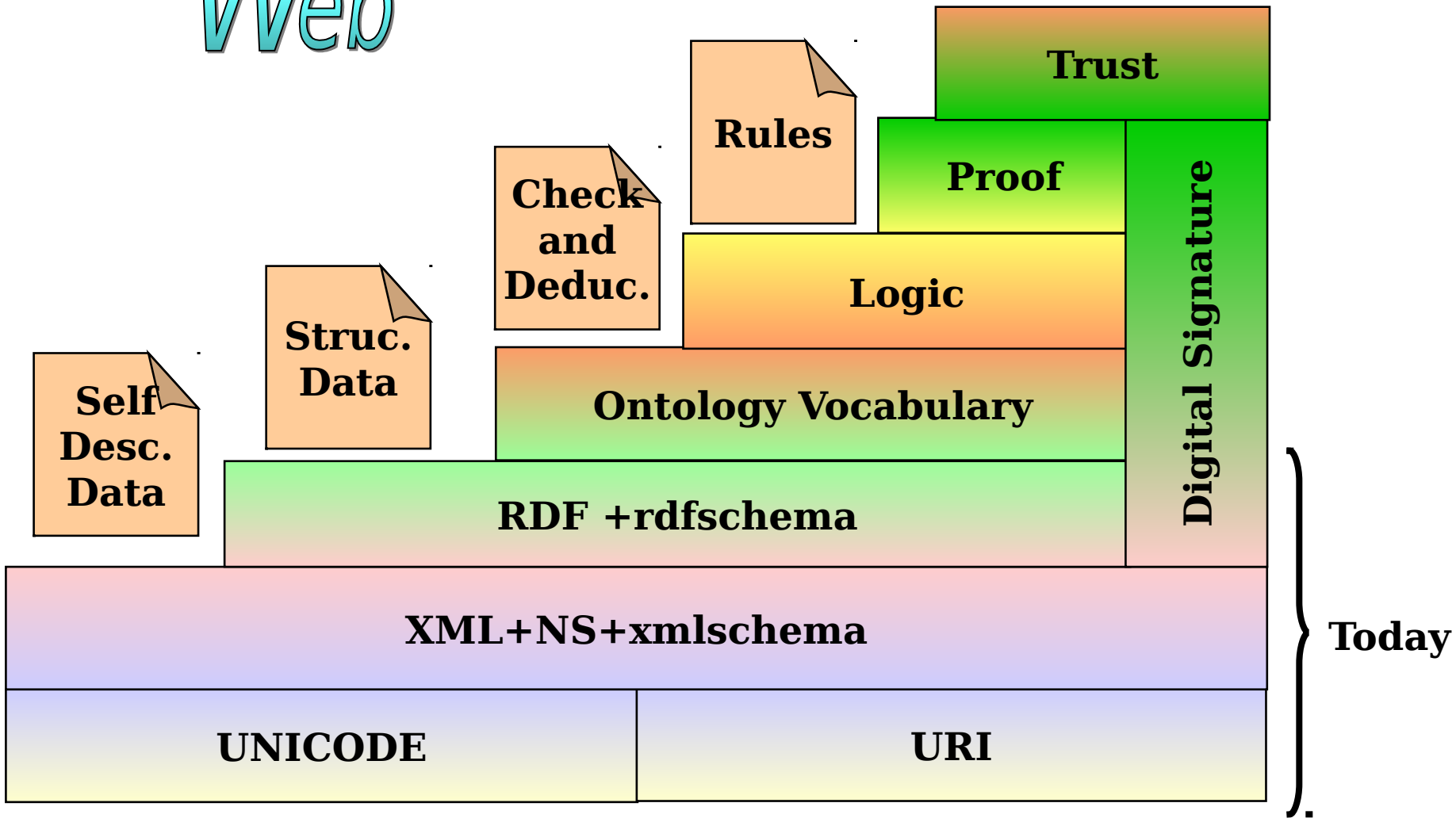
TF Web

- Method for Putting Structured Data into Text File
  - Set of rules, guidelines, conventions for structured data
  - Cross-platform, software and hardware independent standard for transmitting information
- Looks Similar to HTML, But…..
  - Strict adherence to the use of tags (words bracketed by '<' and '>')
  - XML Describes Information/HTML Displays Information
- Text, But is not Meant to Be Read (machine readable)
  - Text files to allow ease of debugging
  - Way to structure, store, and send information
- Conglomeration of Technologies
  - XML Specification, stylesheets, schemas, etc.

XML was designed to store, carry and exchange data

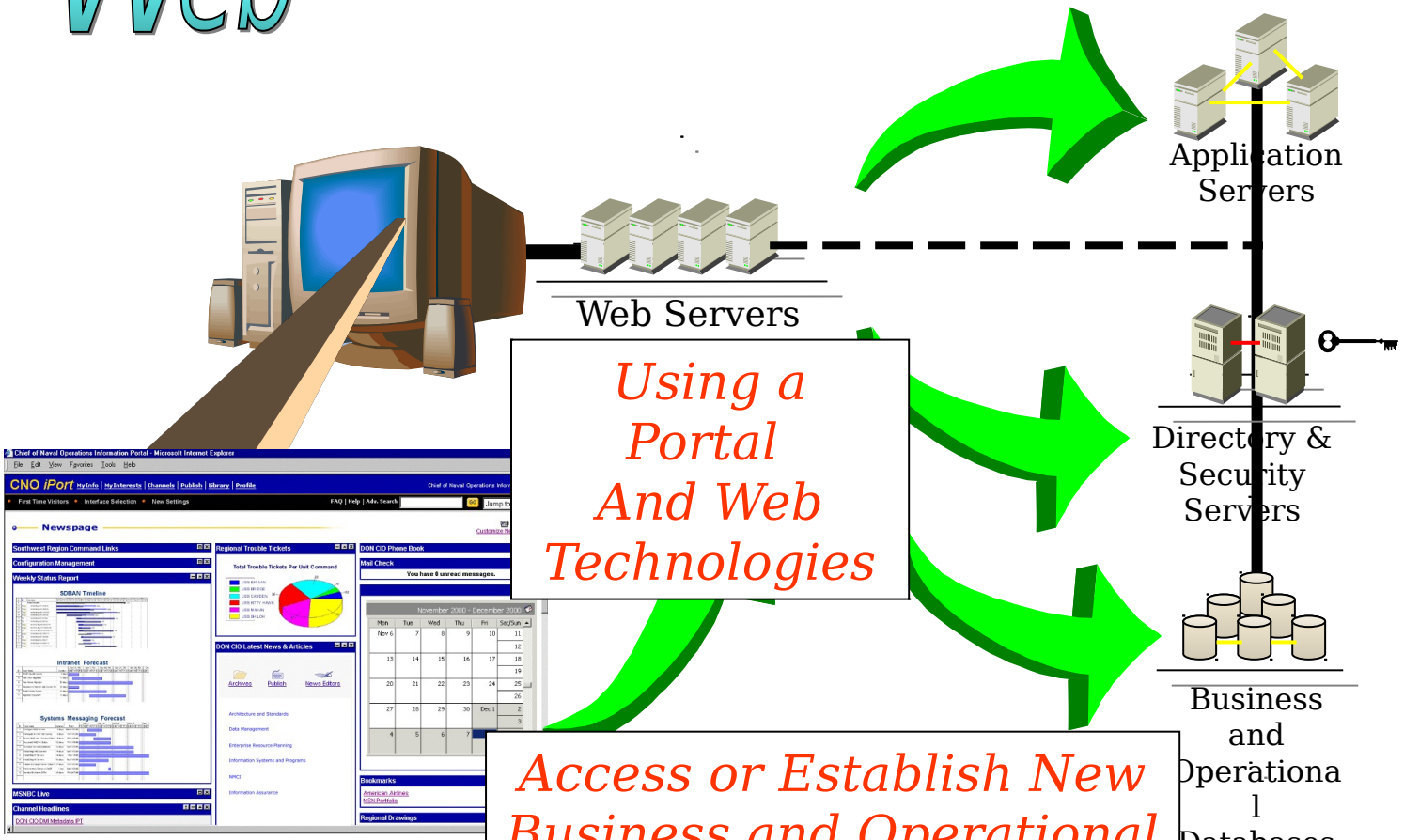
The Semantic Web Layers

TF Web



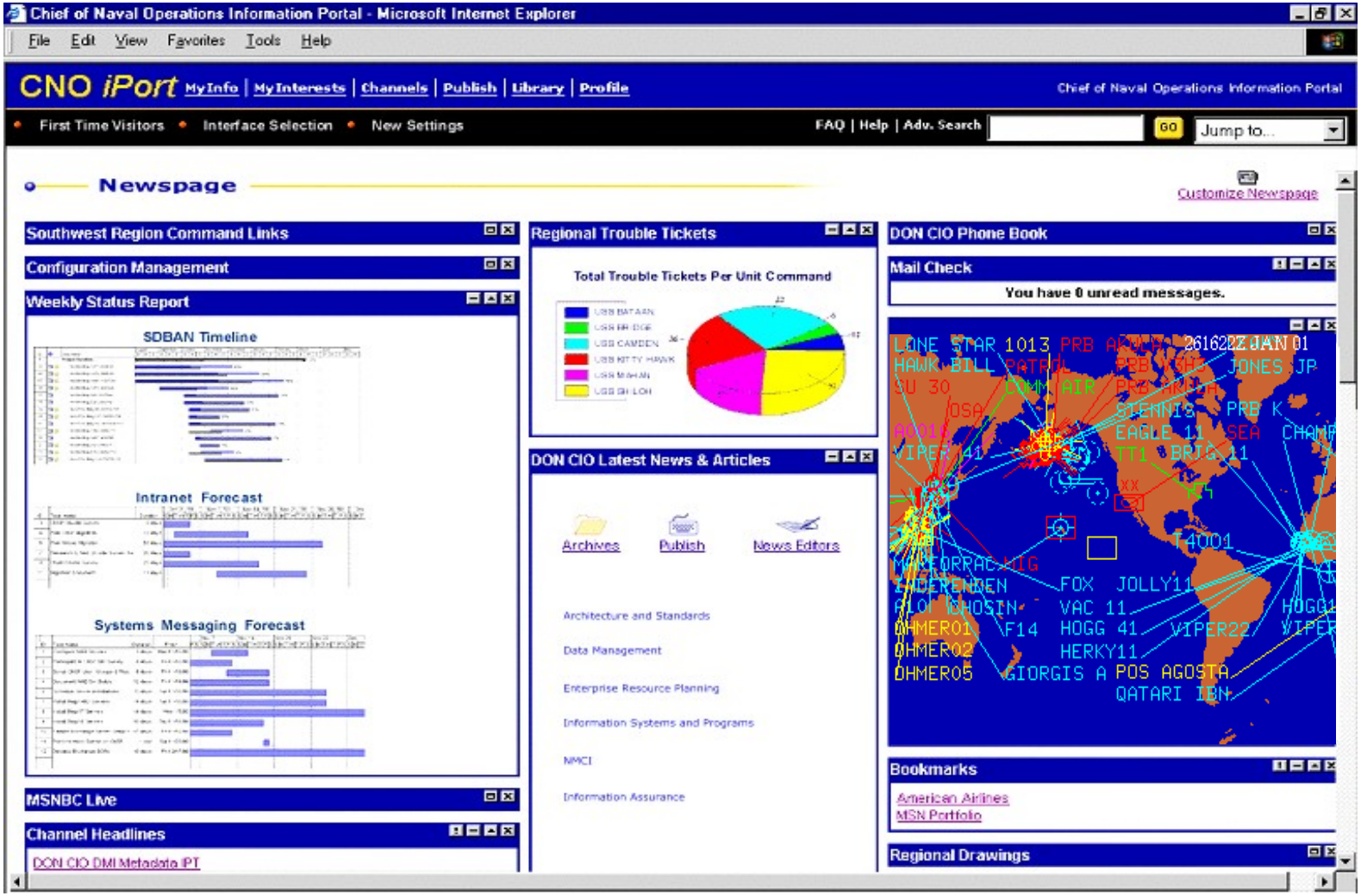
Architecture Operational View

TFWeb


Application Servers
Web Servers
Directory & Security Servers
Business and Operational Databases
Using a Portal And Web Technologies
Access or Establish New Business and Operational Services Anywhere at Anytime

Portal Example

TF Web



MY PORTAL CONFIGURATION (Notional)

TFWeb

My Channels Edit

- ☑ Navy-motd
- ☑ News-nav
- ☐ News-weather
- ☑ TBMCS
- ☐ NAVSSE
- ☑ GCCS-M
- ☐ GCSS

Assigned or mandatory

Optional channels Click to configure or set refresh options

Create Channels

Applications

- Collaboration Tools
  - App sharing
  - Conferencing
  - Instant messaging
  - Mail lists
- Databases
  - BUPERS
  - GCCS-M
  - JOBES
  - MIDB
  - Global Query
- Web Email
- Personnel Phonebook

My Client

Display Size

- ☑ desktop
- ☐ handheld
- ☐ other

Connection

- ☐ High (all graphics)
- ☐ Med (fewer graphics)
- ☑ Low (text only)
- ☐ INFOCON

Format Editor

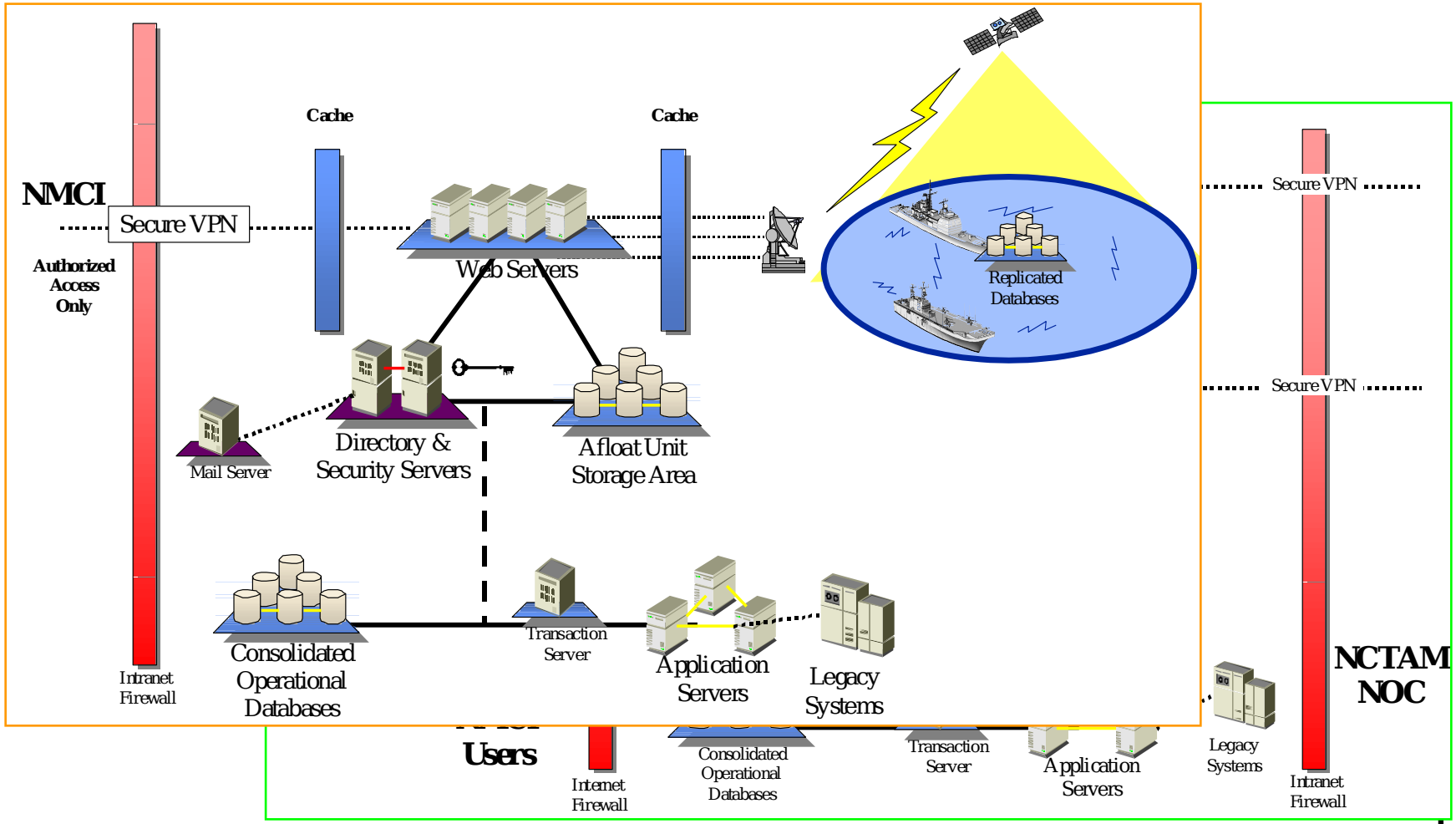
Channel Categories

- News/Media [12]
- Entertainment [9]
- Logistics [45]
- Medical [2]
- Housing [3]

Search Channels

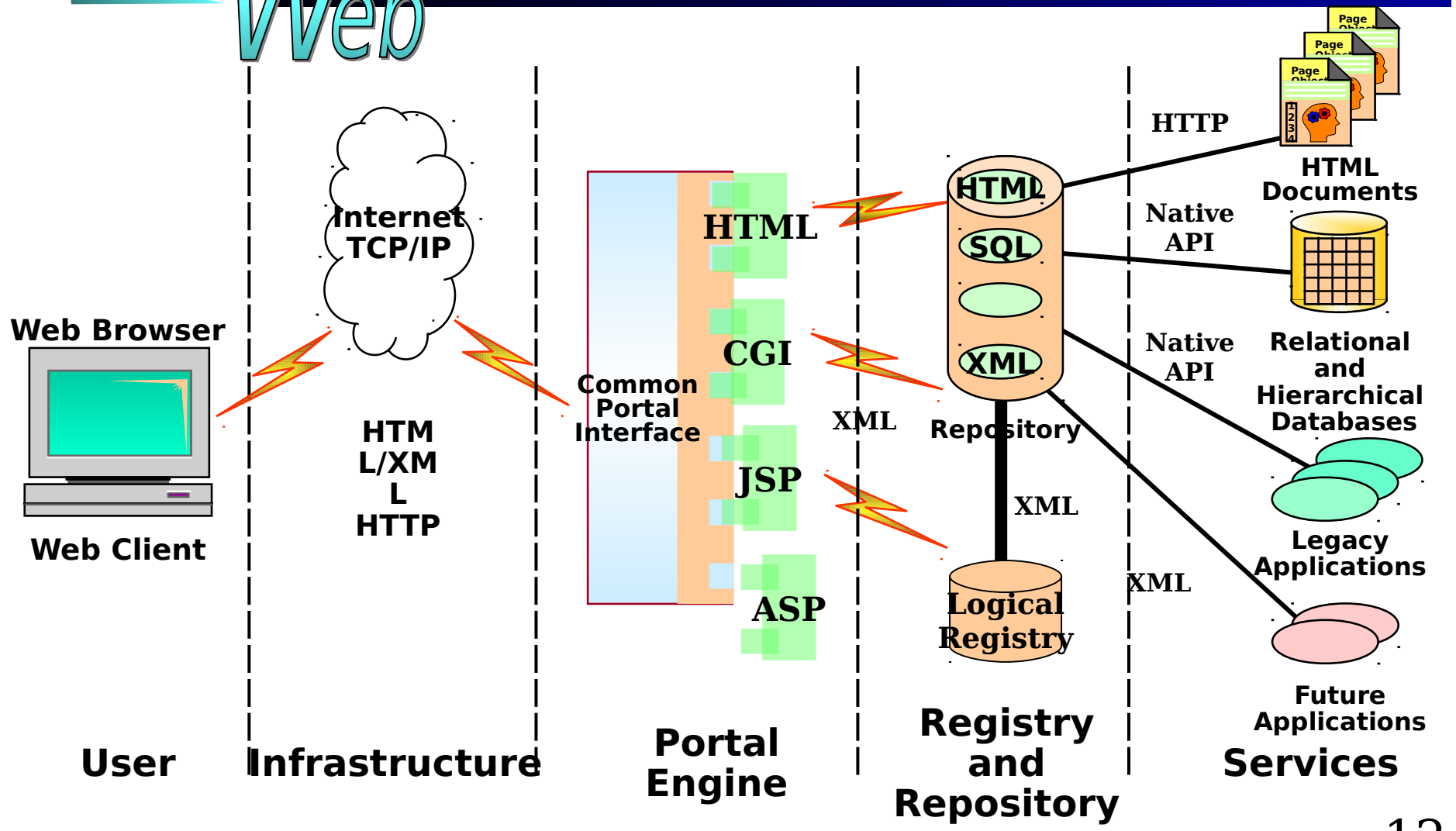
Operations and Business Architecture

TFWeb



Web-Service Access Via Portal

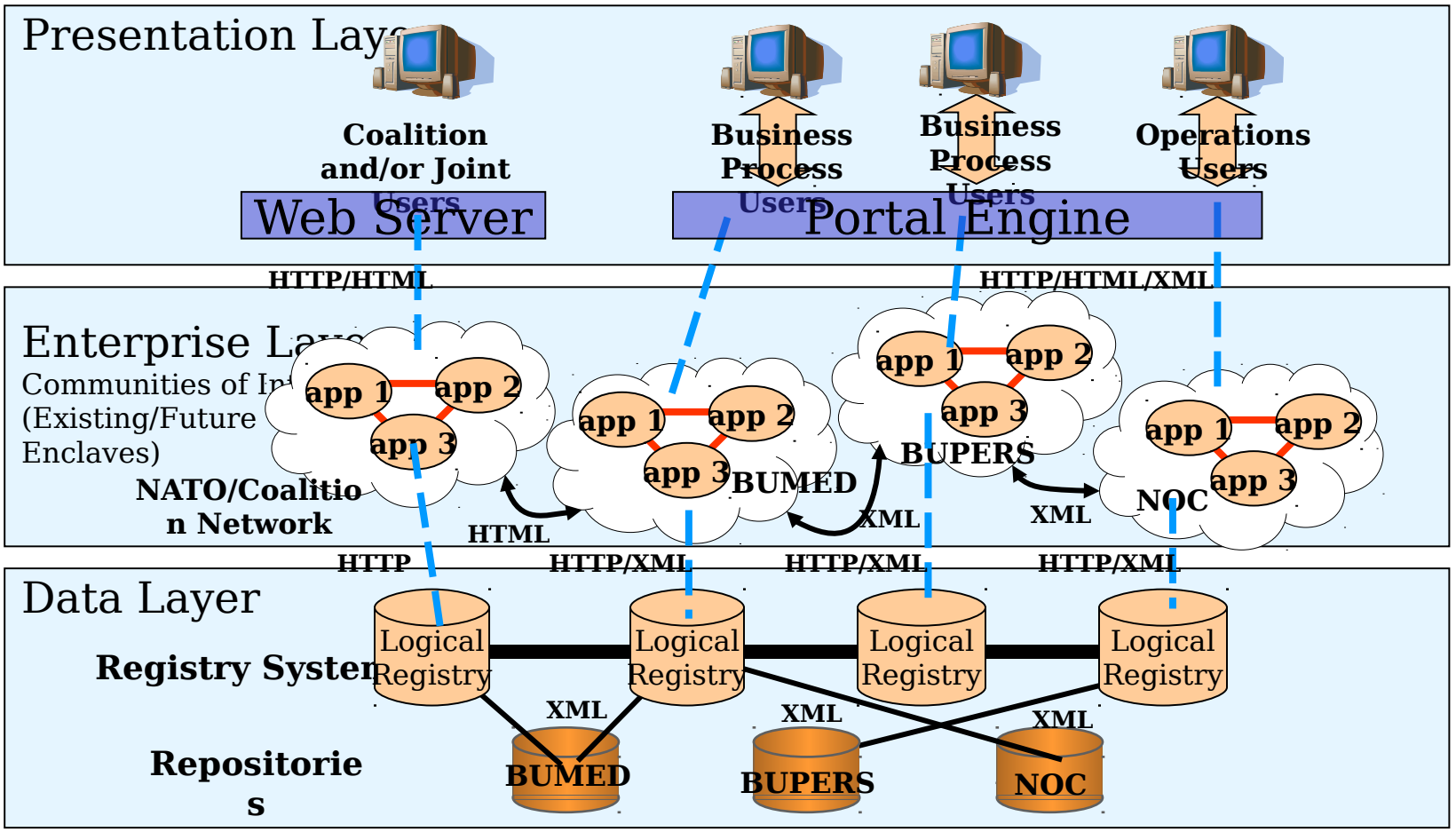
TFWeb



Three Tier Architecture

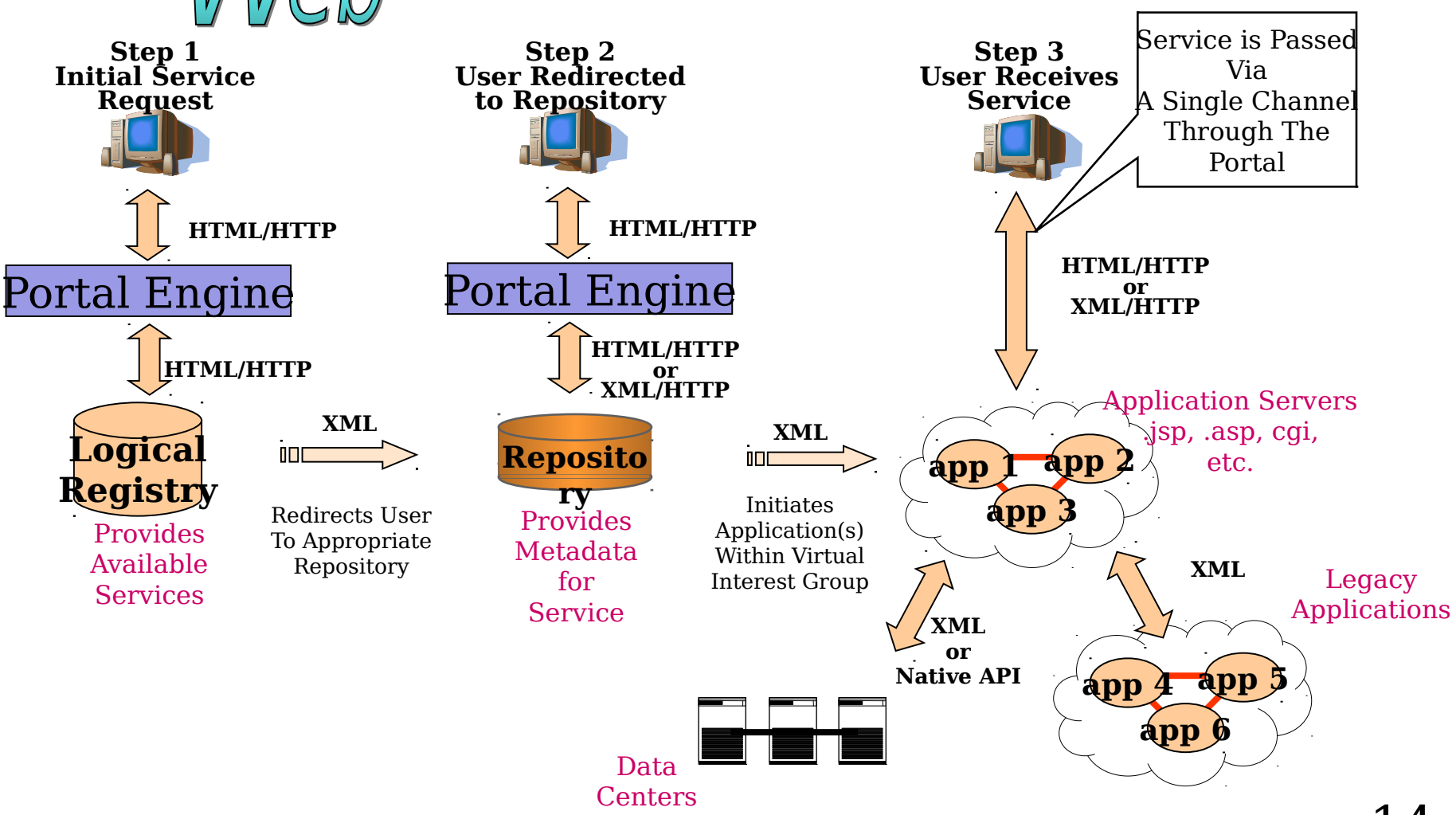
TFWeb

System View



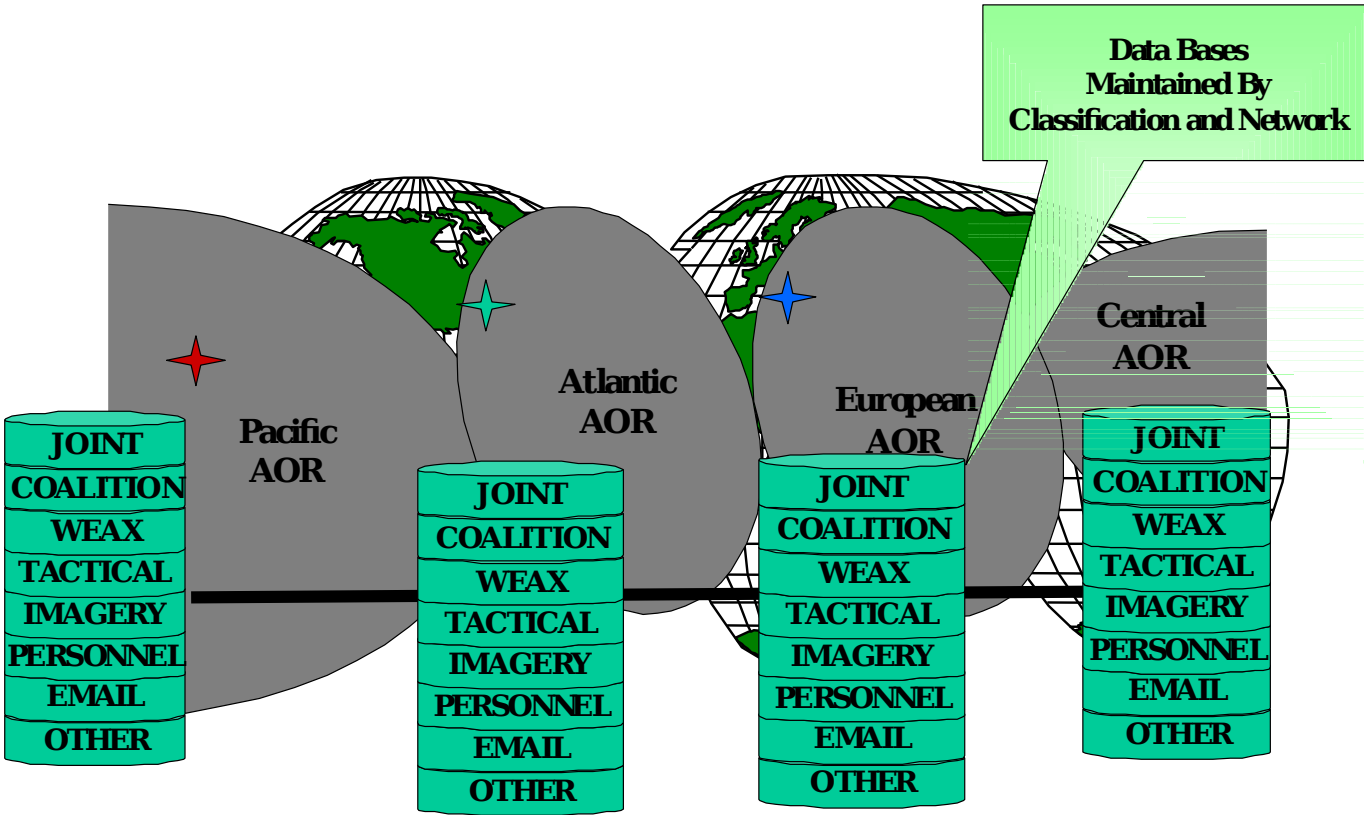
Web-Service Access

TFWeb



Operational Database Consolidation

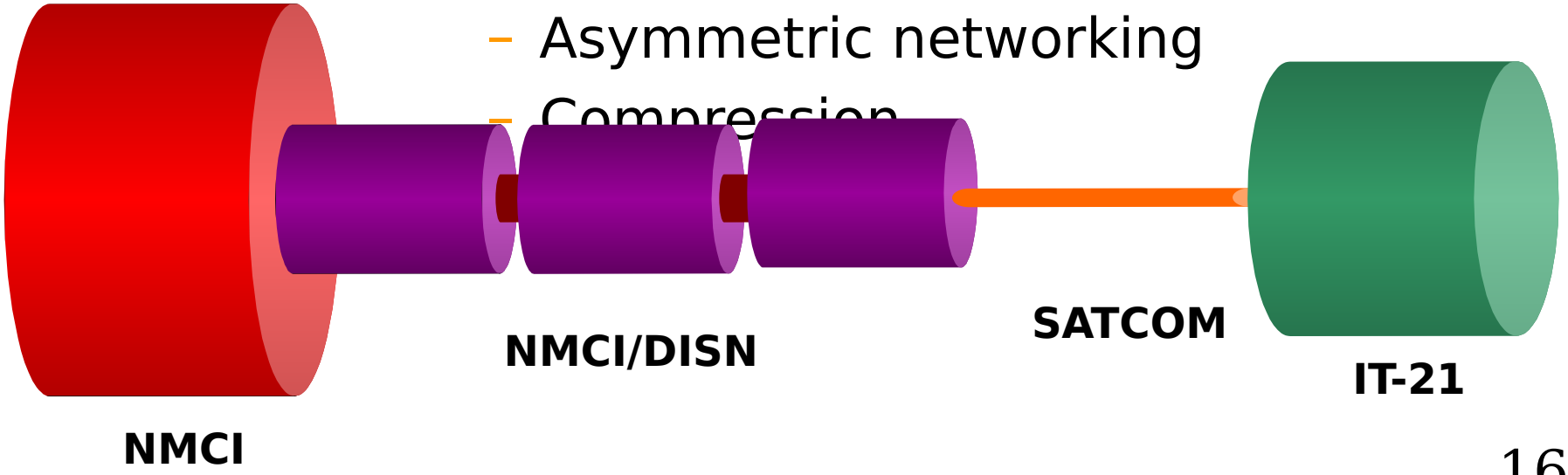
TFWeb



Bandwidth

TFWeb

- Examine use of key technologies:
  - Replication
  - High-bandwidth broadcast systems
  - Static media
  - Asymmetric networking
  - Compression



Technical Summary

TFWeb

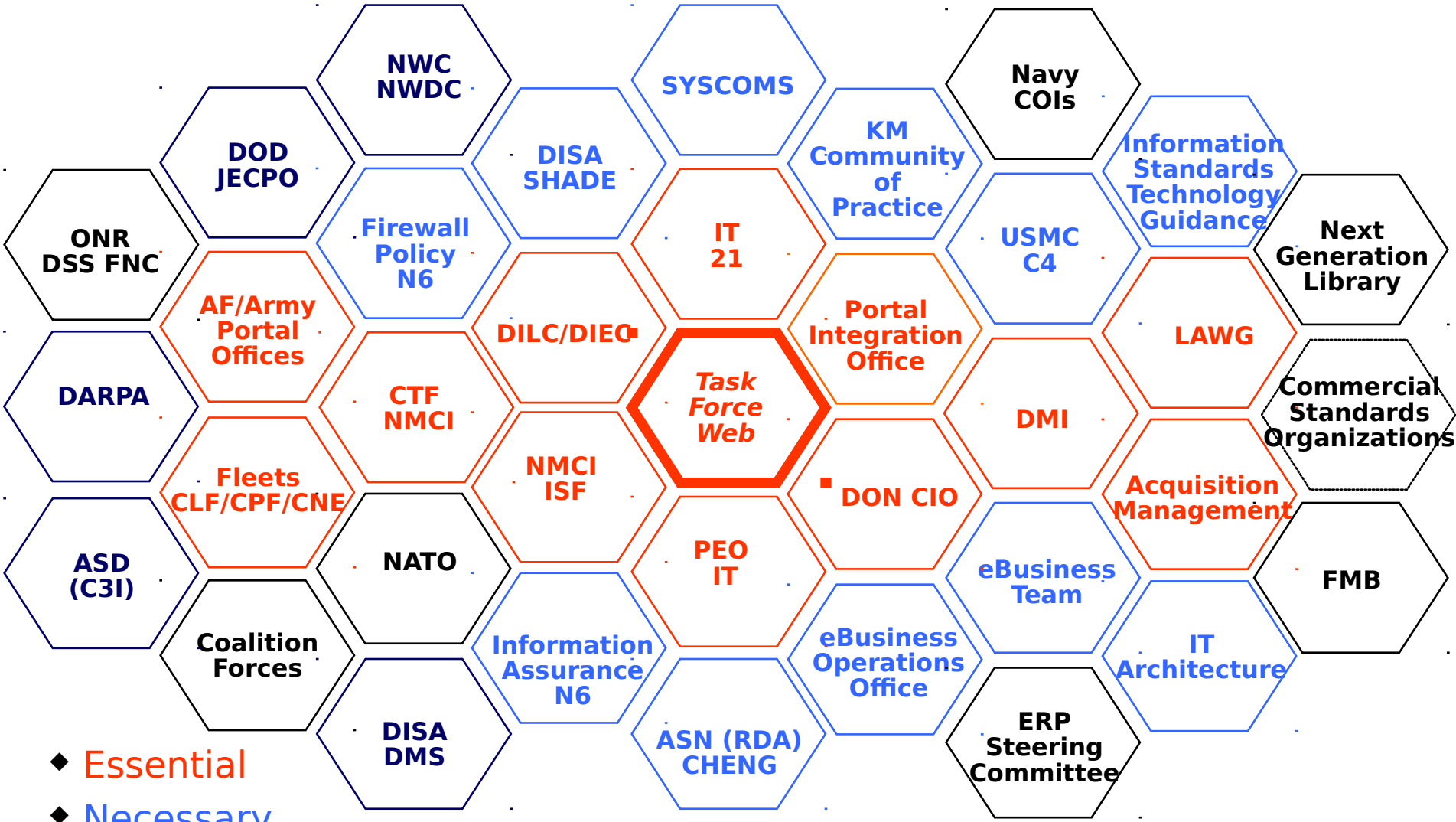
- Architecture is XML centric
  - Technically Feasible at little risk
  - Leverages commercial evolution
  - Future Web languages will incorporate XML
- Standards based
  - Hardware independent
- Facilitates interoperability Navy wide, Joint/Allied and Coalition

The Way Ahead

TF Web

- Portal
  - Engine selection
  - “plug-in” Development and Implementation
  - Architecture Location and Maintenance
  - Common Naval “look and feel” policy
- Registry/Repository System
  - Products
  - File Structure
  - “horse blanket” and location
- Application Server Selection
- Application/Data Base Migration
  - Architecture/Application Developers Guide
  - Policy on ASP, JSP, CGI, PERL, etc.
  - Module Development
- Database (authoritative and consolidated)
- Information Assurance: Authentication, Authorization, and Privacy
- Other?

The Larger WEB Team



- Essential
- Necessary
- Peripheral

TFW Interactions With Existing Programs/Offices

Backup